PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING SPAN WIRE TRAFFFIC SIGNAL TO A MAST ARM TRAFFIC SIGNAL WITH APS AND CPS UPGRADES AT THE INTERSECTION OF MD 704 (M.L. KING JR. HWY.) AT COLUMBIA PARK RD./BELLE HAVEN DR. IN PRINCE GEORGE'S COUNTY. VIDEO DETECTION IS TO BE USED ON ALL APPROACHES, AS WELL AS PASSAGE DETECTION ON THE NORTHBOUND AND SOUTHBOUND APPROACHES.

MD 704 IS CONSIDERED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL CONTINUE TO OPERATE IN A SEMI-ACTUATED MODE USING 8 NEMA PHASES. THE LEFT-TURNS ALONG MD 704 WILL OPERATE WITH EXCLUSIVE LEFT-TURN PHASING AND THE COLUMBIA PARK ROAD/BELLE HAVEN DRIVE LEFT-TURNS WITH WILL BE EXCLUSIVE/PERMISSIVE. AUDIBLE PEDESTRIAN SIGNALS, NEW CURB AND GUTTER AND SIDEWALK WITH ADA RAMPS AND DETECTABLE WARNING SURFACE MATERIAL SHALL BE INSTALLED ON EACH CORNER OF THE INTERSECTION. THE PEDESTRIAN PHASES ACROSS MD 704 WITH OPERATE WITH PUSHBUTTON ACTUATION. THE PEDESTRIAN PHASES ALONG COLUMBIA PARK ROAD AND BELLE HAVEN DRIVE WILL OPERATE ON RECALL.

SPECIAL NOTES

1. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF PROPOSED SIGNAL HEADS AND SIGNAL POLES. IF NEW INSTALLATION CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATIONS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
3. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00 - 30, 104.12 - 01, 104.13 - 01, 104.31 - 01, 104.32 - 01, 104.81- 02.
4. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY THE SHA SIGNAL SHOP. ALSO, ALL ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. ED RODENHIZER TO COORDINATE BOTH AT (410) 787-7652.
5. APS WILL FUNCTION AS FOLLOWS:

   TO CROSS MD 704 (EAST AND WEST LEGS)
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTION UNIT WILL ANNOUNCE THE MESSAGE: "WAIT TO CROSS MLK AT COLUMBIA PARK AND BELLE HAVEN".
   B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

   TO CROSS COLUMBIA PARK ROAD (NORTH LEG)
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTION UNIT WILL ANNOUNCE THE MESSAGE: "WAIT TO CROSS COLUMBIA PARK AT MLK".
   B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

   TO CROSS BELLE HAVEN DRIVE (SOUTH LEG)
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTION UNIT WILL ANNOUCE THE MESSAGE: "WAIT TO CROSS BELLE HAVEN AT MLK".
   B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
6. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

   MR. BRIAN YOUNG, ASSISTANT DISTRICT ENGINEER - TRAFFIC
   PHONE: (410) 513-7409

   MR. AUGIE REBISH, UTILITY ENGINEER
   PHONE: (301) 513-7350

   MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
   PHONE: (301) 513-7304

   MR. RICHARD L. DAFF SR., CHIEF - TRAFFIC OPERATIONS DIVISIONS
   PHONE: (410) 787-7630

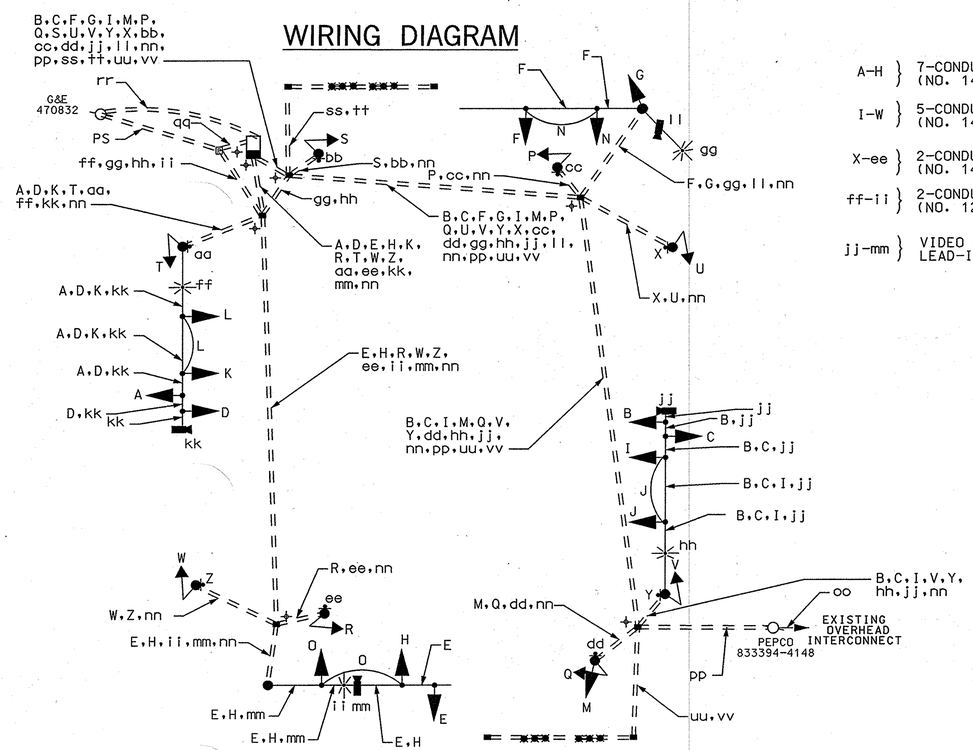
   MR. EDWARD RODENHIZER, CHIEF - SIGNAL OPERATIONS SECTION
   PHONE: (410) 787-7652

   THE POWER COMPANY REPRESENTATIVE IS:
   MR. RICHARD CHILCOAT
   POTOMAC ELECTRIC POWER COMPANY
   8300 OLD MARLBORO PIKE
   UPPER MARLBORO, MARYLAND 20772
   PHONE: (301) 548-4333

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PHASE 1 & 5	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																							
PHASE 1 & 6	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 & 6 CHANGE	←Y–	←Y–	G	G	←R–	←R–	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 & 5	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 & 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 & 7	←R–	←R–	R	R	←R–	←R–	R	R	←G/R	R	R	R ←G–	←G/R	←G/R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 3 & 8, 4 & 7 OR 4 & 8																							
PHASE 3 & 8	←R–	←R–	R	R	←R–	←R–	R	R	←G/G	G	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 & 8 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	←Y/G	G	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 7	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	G ←G–	←G/G	←G/G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 7 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	R	G ←Y–	←Y/G	←Y/G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	G	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R	FL/←R	FL/Y	FL/Y	FL/←R	FL/←R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



MD 704 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

KEY

A–H	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
I–W	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
X–ee	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) {PUSHBUTTON}
ff–ii	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) {LUMINAIRE}
jj–mm	VIDEO DETECTION CAMERA LEAD-IN CABLE
nn	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
oo	EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
pp	REROUTED 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
qq	POWER SERVICE UNDERGROUND 3-WIRE 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG THHN/THWN)
rr	TELEPHONE CABLE
ss–vv	MICROLOOP PROBE SET WITH LEAD-IN CABLE
PS	3-WIRE, 1 CONDUCTOR 250 KCML ELECTRICAL CABLE
⏚	GROUND ROD

TOD NO:XX445-08
SHA NO: PG719A54/B54
MD 704@ COLUMBIA PK

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 704 @ COLUMBIA PARK ROAD/
BELLE HAVEN DRIVE

TRAFFIC SIGNAL – GENERAL INFORMATION

SCALE NTS	ADVERTISED DATE 04-15-08	CONTRACT NO. P-408-001-385	
DESIGNED BY JEH		COUNTY PRINCE GEORGE'S	
DRAWN BY JEH		LOGMILE 16070402.18	
CHECKED BY DSU CSW		TIMS NO. G-131	
F.A.P. NO. SEE TITLE SHEET		TOD NO. <TOD NO>	
TS NO. 322F	DRAWING SG-02 OF 3	SHEET NO. 2 OF 3	

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BY: cward

PLOTTED: Tuesday, October 28, 2008 at 8:50:42 AM
FILE: pSG-N001_MD704.dgn